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MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
TELECOMMUNICATIONS ADVISORY GROUP

May 20, 2004
MAG Office
302 North First Avenue
Phoenix, Arizona

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MEMBERS ATTENDING
Greg Binder, Phoenix, Chair
*Kevin Hinderleider[1], Avondale
Dee Hathaway[1], Buckeye
✓Jim Keen[1], Carefree
*Pat McDermott, Chandler
✓Pat Timlin, El Mirage
*Mike Ciccarone[1], Fountain Hills
*Shawn Woolley, Gilbert
Ajay Joshi, Glendale
*John Imig[1], Goodyear
**Cary Parker[2], Maricopa County

**Dale Shaw, Mesa
**Duncan Miller[1], Paradise Valley
**Ralph Spencer, Peoria
**Lyn Gillean for Lester Godsey, Queen Creek
**Kevin Sonoda, Scottsdale
Randy Jackson, Surprise
✓Dave Heck, Tempe
✓Bruce Johnson[1], Tolleson
*Karen Strickland, ADOT
Randi Alcott[1], RPTA

*Members neither present nor represented by proxy.

OTHERS PRESENT
✓Dr. William Lewis, ASU
✓Dave Mckee, ASU
✓Duane Woerman, ASU
**James Higbe, Center for Technology Inclusion
✓Chuck Brown, El Mirage
✓Mark Johnson, Guadalupe
 Galen Updike, GITA

Fowler Brown, HotZona
Craig Chenery[2], MAG
Debbie Kohn, MAG Telecommunications
Assoc.
Heidi Pahl[1], MAG
Audrey Skidmore, MAG
✓Matt Spathas, Sentre Partners

**Participated via audioconference.
✓ Participated via videoconference.

[1] = RVS Site Coordinator
[2] = RVS Backup Site Coordinator

1. Call to Order

   The meeting was called to order at 10:04 am by Chairman Greg Binder. Voting members Dave Heck, Bruce Johnson, Pat Timlin and Jim Keen attended via videoconference. Voting members Dale Shaw, Kevin Sonoda, Ralph Spencer, Cary Parker, Duncan Miller and proxy Lyn Gillean attended via audioconference. All members introduced themselves.

2. Call to the Audience

   Kevin Sonoda asked whether members may be able to receive the meeting agendas in electronic format only and not be sent the paper version. Greg Binder asked if anyone else was interested in receiving the agenda packets electronically. Randy Jackson, Ralph Spencer and Dale Shaw concurred with Kevin Sonoda. Mr. Binder asked MAG staff to look into this request. Heidi Pahl stated that this change can be made, noting that for the next meeting she would only send electronic agenda packets to those with e-mail addresses and a hard copy to those without e-mail. Ms. Pahl reminded the TAG that the agendas and meeting minutes are available on the MAG Web site.

3. Approval of April 15, 2004 Meeting Minutes

   It was moved by Randy Jackson, seconded by Ajay Joshi and unanimously recommended to approve the April meeting minutes.

4. Public Wi-Fi Hotspots

   Greg Binder introduced James Higbe, President of the Center for Technology Inclusion from Jacksonville, Florida. James Higbe gave brief biographical information about himself. James Higbe gave a PowerPoint presentation titled, "Jax Wireless Internet Zone, An Innovative Public/Private Partnership to Bridge the Digital Divide and Enhance the Economy." The presentation was available on the MAG Web site. The presentation covered the history of the Jacksonville Wireless Internet Zone project, the project technology, the community benefit, the project team, the community pilots, the project Web site, and funding sources for the project.

   Pat Timlin commented that there is a lot of competition for broadband in Phoenix and asked if the Jacksonville wireless project is something that would work in Phoenix. James Higbe replied that in Jacksonville the project participants were not traditional buyers of telecommunications service. Mr. Higbe stated that Bell South, the local telephone company, became a partner in the Jacksonville wireless project to promote the long-term use of telecommunications by making it available to school age children. James Higbe stated that the network is free but not open and participants must sign a user agreement. Mr. Higbe noted that participants of the Jacksonville wireless project typically do not have broadband available therefore the wireless option works for them. He added that the City of Jacksonville-based call center handles technical support issues and Connexis handles infrastructure issues. James Higbe stated that peer trainers are also available at the community centers.

Matt Spathas stated that he applauded Jacksonville's efforts to bridge the digital divide and asked if the participating families already have access to broadband at $30 - $40 per month and inquired if the project is providing free wireless service to them instead. James Higbe replied that most of the targeted population does not have a computer or access to the services. James Higbe stated that if they do not have a computer, then the project provides the computer and the free wireless access and if they do have a computer, the project enables the wireless connection. Mr. Higbe noted that the project has a low-income qualification and that they are not seeing those that could afford broadband telecommunications services switch to take advantage of the free wireless access.

Galen Updike commented that the Jacksonville project is similar to libraries that provide Internet access and asked if Jacksonville had looked at the library model. James Higbe replied that they had looked at the library model but felt that it did not provide a competitive advantage to the participants. Mr. Higbe stated that the libraries offered a solution but that high-speed access at home, levels the playing field for students. He added that the project uses an Internet filter for hate crime material and pornographic material.

Galen Updike commented that the icons on the Web site were all in English and asked whether the Web site was available in Spanish or another language. James Higbe replied that Phase I of the pilot project does not include an alternate language and the Hispanic population in Jacksonville did not demand it. He added that a multilingual Web site would be addressed in Phase II.

Duane Woerman asked how they handle transient users of the network in a public space such as a park. James Higbe replied that a transient user may use the public access. James Higbe stated that the project audits the usage of the participants. Mr. Higbe said that they give participants desktop computers which are installed in the home and if the participant moves out of the project area, the participant must give back the desktop computer.

Debbie Kohn asked how success of the project is measured and if the project is considered a success. James Higbe replied that the project participants are given a pre-evaluation as part of the sign-up to access the service that covers basic computer knowledge and familiarity and that the assessment is given to the participants again in six months. Mr. Higbe stated that they have a lot of anecdotal evidence of success such as participants' grades improving or a second job in the home due to high-speed Internet access. James Higbe stated that in the future they are looking at using a portal to access user statistics. He stated that the pilots measure how much time is spent on-line, pre and post assessment results and anecdotal results.

Greg Binder introduced Matt Spathas of Sentre Partners and read a brief biography. Matt Spathas commented that he had recently returned from a tour of cities in Asia and found that they are not building digital buildings but are building digital cities and digital lifestyles. Matt Spathas commented that broadband has been treated as a service rather than a utility in the United States and that this emphasis on service has caused broadband deployment to sputter. Mr. Spathas commented that Asia has a 21st century vision. He gave a PowerPoint presentation titled, "Bandwidth Bay: Urban Wireless Internet Amenity." The presentation was available on the MAG Web site. The presentation covered the project technology, access, a comparison of similar wireless technologies, and a map of the nine downtown San Diego hotspots. Matt Spathas stated that the real estate perspective in

downtown San Diego is that broadband is a utility and wi-fi an amenity. He stated that San Diego has two fully wi-fi enabled buildings. He stated that the expense is not in connecting the service; the expense is in the back end in monitoring, metering and charging for the service. Mr. Spathas stated that their wi-fi enabled public access uses excess private wi-fi capacity and that their goal is to make San Diego the wi-fi capital of the United States. Matt Spathas stated that to the best of his knowledge, the Esplanade buildings IV and V in Phoenix are the first 100% wi-fi enabled buildings in Arizona and they have wi-fi access both inside and in the common area outside.

Galen Updike asked if private carriers are concerned about wi-fi. Matt Spathas replied that Sentre Partners is working with the private carriers and that the carriers are starting to understand that broadband is a utility. Matt Spathas stated that the metric that they use is 10 bits per square foot for buildings and that most buildings have a lot of excess bandwidth. Matt Spathas stated that in the old model carriers provisioned T-1's to each tenant in a building and using the Esplanade as an example that would cost about $27,000 per month but in the new model providing wi-fi to the whole building at 10 bits per square foot that would be about $1,000 per month. Matt Spathas stated that broadband needs to be discussed in terms of a utility and wi-fi as an amenity.

James Higbe stated that he liked the utility analogy and asked whether they are filtering the bandwidth that reaches the public. Matt Spathas stated that they are not filtering it but are using a bandwidth management tool to control how much bandwidth is used by an individual user. Mr. Spathas stated that they will need to address this issue in the future and are looking for a smart solution. He reported that they are monitoring all of the access points 24 hours a day, seven days a week and have not found anyone over utilizing bandwidth. Matt Spathas stated that they are provisioning all of the points at 10 bits per square foot and that no one comes close to using the capacity.

Dave Heck commented that wi-fi hotspots are perceived as a simple project but that these are paid for by the tenants of a building and offered as an amenity. Mr. Heck asked how San Diego addressed the concern of government potentially taking businesses away from private sector businesses, such as Starbucks, by offering free public wi-fi.

Matt Spathas replied that there is too much bandwidth and it is already being paid for and is not efficiently distributed and could be pushed out to the public. Matt Spathas gave an analogy of broadband bandwidth being similar to water and electricity and used Tempe City Hall to illustrate his example.

Duane Woerman asked how many access points are deployed. Matt Spathas replied that they use Cisco BG access points and use two access points per floor in a cris-crossed deployment.

Duane Woerman asked whether due diligence had been done and security concerns addressed. Matt Spathas replied that the Internet access they provide is open and free but that they have taken the liability for the City of San Diego.

Greg Binder introduced Galen Updike. Galen Updike gave a PowerPoint presentation on the Canamex Corridor project. The presentation covered the geographical boundaries and coverage,

proposed wi-fi access points, project phasing, potential funding, and challenges to be addressed. The presentation also covered the development of a State Telecommunications Strategic Plan and the formation of a State Telecommunications Policy Council by the Governor as well as regional entities called "regional councils" within the state.

Galen Updike introduced Fowler Brown of Hotzona to discuss the Arizona State Legislature's hotspot. Fowler Brown commented that wireless access required access to high-speed broadband and that many areas of Arizona do not have high-speed broadband access. Fowler Brown commented that wireless is coming to phones and personal digital assistant (PDA)s, not just desktops and laptops. Fowler Brown gave a PowerPoint presentation titled "AZ Power: unWiring the Legislature." The presentation covered the project vision, overview, technical overview, features, security, project rules of thumb, funding and costs, partnering, success criteria and lessons learned. Fowler Brown stated that the hotspot access is open access and they do not monitor usage. Fowler Brown stated that users must log in and accept an end user agreement to participate. Fowler Brown stated that the hotspot is free to the legislature, users and taxpayers. Fowler Brown stated that they do bandwidth management and back end redirection for mail servers.

Randi Alcott asked if the access is available in the Administration building. Fowler Brown replied that it is not available in the Executive building but that it is available in the House and Senate buildings and in between them. Randi Alcott asked if it will be included in the future. Galen Updike replied that due to the concerns about the separation of powers in the Arizona constitution, it is not now, but could be in the future. Fowler Brown stated that this hotspot is a completely separate network from the State telecommunications network and that access should be ubiquitous.

Randi Alcott asked what motivated Cox and Intel to participate and whether Qwest was asked to participate. Fowler Brown replied that Intel was looking for a national showcase location for their "unwired" buildings and that Cox was being a good corporate citizen. Galen Updike stated that Cox has the State contract for telecommunications services for the legislature and the carrier services contract for Voice over IP for the legislature.

Matt Spathas commented that the real estate community sees broadband access as a requirement and as essential infrastructure and asked whether the government in Arizona is dropping in fiber when they are building roads. Galen Updike replied both yes and no and that the State is taking a long look at this issue and it will be addressed as part of the State Telecommunications Plan.

James Higbe commented that one Watt is the standard broadcast and asked whether the State would be amplifying beyond one Watt along the Canamex Corridor. Galen Updike replied that in the Safford area they are taking it to six Watts and it covers six miles across. Galen Updike stated that the Federal Communications Commission (FCC) suggested one Watt but that in areas with no people it may be amplified more.

James Higbe asked if a user will need to reauthenticate as they move through the Canamex Corridor. Galen Updike replied that they will not need to and that it will be a seamless handoff. Mr. Higbe

asked what equipment is being used for the seamless handoff. Galen Updike replied that it is a combination of Lucent and other equipment, that is being used in Graham County.

5.   MAGTAG Working Group Projects

This item was postponed.

6.   Announcements and Public Input

Randy Jackson announced that the City of Surprise has started e-mail filtering and found that 67% of its incoming e-mail is spam.

7.   Date of Future Meetings

Greg Binder reminded the group that the next MAGTAG meeting will be Thursday, June 17, 2004 at 10:00 am.

The meeting was adjourned at 12:05 p.m.